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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,277	08/22/2003	Craig A. Brice	TA-00578	9326

7590

07/12/2005

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EXAMINER

LIN, ING HOUR

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,277

Applicant(s)

BRICE, CRAIG A.

Examiner

Ing-Hour Lin

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 21-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/03 & 2/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-20, drawn to a method of forming an alloy, classified in class 164, subclass 460.

II. Claims 21-30, drawn to an alloy, classified in class 164, subclass 543.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and Group II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the alloy as claimed can be made by another and materially different process such as rapidly quenching and solidifying a melt of a desired composition at a particular cooling rate onto a moving, chilled casting surface.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with attorney James Bradley on June 16, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 21-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 5-11, 13-14 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis et al.

Lewis et al (col. 7, lines 4+) teach the claimed process of forming an alloy from the use of laser produced from a laser generator 14 and guided by fiber optic 16 for the purpose of focusing and melting a convergent metallic powder in an argon carrier gas in order to form a molten pool 3 on a substrate (support 4) and to be solidified to form a continuous lines and layers of alloy having a width formed by side-by-side layers using a controller 25 including computer, wherein the powder is uniformly streamed and injected into an annular space 57 from four nozzles (powder delivery ports 64) spaced at about 90° apart (col. 9, lines 40+) in a deposition

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head 1, and the deposition head 1 including delivery nozzle 41 and heating optics package 40 is mounted movably and rotatably on a movable platform including arm 23 and a shaft 24.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-4 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis et al in view of Keicher et al.

Lewis et al fail to teach the use of heating source including electron beam and arc. However, Keicher et al (col. 4, lines 33+) teach the use of general heating source including and electron beam and arc in an energy-beam-driven rapid fabrication system for the purpose of vastly improving utility and economy over existing techniques such as laser. It would have been obvious to one having ordinary skill in the art to provide Lewis et al the use of heating source including electron beam and arc as taught by Keicher et al in order to effectively reduce cost in an energy-beam-driven rapid fabrication system.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis et al in view of Bialach.

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Lewis et al fail to teach the use of a metallic wire. However, Bialach (col. 2, lines 34+) teach the use of a metallic wire as a feedstock in a method for metal deposition on an edge of metallic substrate for the purpose of improving metallurgical property for a deposit without excessive waste of material or the use of chills. It would have been obvious to one having ordinary skill in the art to provide Lewis et al the use of a metallic wire as taught by Bialach in order to effectively improve metallurgical property for a deposit without excessive waste of material or the use of chills.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ing-Hour Lin whose telephone number is (571) 272-1180. The examiner can normally be reached on M-F (8:00-5:30) Second Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

I. H. Lin

I.-H. Lin

7-5-05

KEVIN KERNS
PRIMARY EXAMINER

Kevin Kerns 7/8/05